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October 3, 2006

Appl. No. 10/810,242
Applicant James M. Harris
Commissioner for Patents
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37 CFR 1.132 Affidavit

Sir:

In the matter of a 37 CFR 1.132 Affidavit by Dr. James M. Harris setting forth the facts demonstrating and supporting the "unexpected results" achieved by the present invention disclosed in 10/810,242, please note the following.

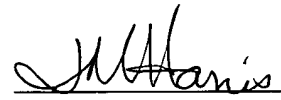
1) I am one of the inventors of U.S. 5,865,417 and U.S. 6,149,123; as CEO of the assignee, Redwood MicroSystems, Inc., I directed the research and development efforts of the company during the time of all three inventions, a span of almost eight years.

2) The problem solved by the instant invention became evident only after we had solved other problems associated with a silicon micro-valve operation. Prior to that time all of the inventors were unsure of the exact cause of this mode of silicon membrane fracture.

3) In hypothesizing about possible solutions, the disclosed solution was only one of several the inventors discussed and tried. All of the inventors were somewhat surprised when this solution worked as we thought the second pedestal might provide "too much" stiffening and



not allow the membrane to flex sufficient for the valve to be functional in a commercial manner.


James M. Harris, Ph.D.